

PENINSULA ENERGY
AN ADVANCED STAGE URANIUM DEVELOPER
NOBLECON18

20 April 2022

PENINSULA ENERGY ASX:PEN; OTCQB:PENMF
INVESTOR PRESENTATION

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Please note that Production Targets within this presentation are based on a proportion of inferred resources. There is a low level of geological confidence associated with inferred mineral resources and there is no certainty that further exploration work will result in the determination of indicated mineral resource or that the production target itself will be realised.

Competent Person Statement

The information in this presentation that relates to Exploration Results, Mineral Resources or Ore Reserves at the Lance Projects is based on information compiled by Mr Benjamin Schiffer. Mr Schiffer is a Registered Professional Member of the Society of Mining, Metallurgy and Exploration (Member ID #04170811). Mr Schiffer is a professional geologist employed by independent consultant WWC Engineering. Mr Schiffer has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Schiffer consents to the inclusion in the presentation of the matters based on his information in the form and context in which it appears.

This presentation was approved by the Managing Director/CEO

Cautionary & Inferred Resources Notice

The Feasibility Study completed for the Lance Projects includes measured and indicated resources and an assumed resource conversion of 60% (inferred to indicated or greater). The purpose of the Feasibility Study is to demonstrate the Lance Projects economic viability and the robustness of the planned low pH operations over an extended mine life beyond the existing Ross production area.

The Feasibility Study itself is based on various assumptions, including homogeneity of the delineated ore body contained within the Lance Projects. This is considered reasonable by the Company's technical consultants, competent persons and independent external consultants. The Company believes that it has a reasonable basis upon which to prepare and release these Feasibility Study results, particularly given that the Lance Projects have been in operation since December 2015. Whilst the Company considers that all the material assumptions underpinning the Feasibility Study are based on reasonable grounds, there is no certainty that they will prove to be correct or that the outcomes indicated by the Feasibility Study will be achieved.

The Company believes it has a reasonable basis for providing the forward-looking statements and production targets included in this announcement. The material assumptions are included in Appendix 1 of this announcement and in the JORC table disclosures appended. The detailed assumptions regarding the resources are outlined in the ASX announcement released on 14 November 2018.

Investors should also note that there is no certainty that the Company will be able to raise the amount of funding for the Lance Projects when it is required or on terms that are not overly dilutive or that are favourable to the value of the Company's existing shares.

This presentation has been prepared in accordance with the JORC Code (2012) and the ASX Listing Rules. There is a low level of geological confidence associated with inferred mineral resources and there is no certainty that further exploration and delineation work will result in the determination of indicated mineral resources or that the production target itself will be realised. Financial information contained in this announcement is preliminary in nature and is in-part based on low-level technical and economic assessments and is insufficient to support the estimation of reserves or to provide assurance of economic development.

Under the Feasibility Study mine plan, the first 5 years production can be sourced almost entirely from Measured and Indicated Resources. If the Inferred Resources are excluded from the Feasibility Study, the economic analysis still forecasts a positive financial performance. Therefore, the Company is satisfied that the use of Inferred Resources is not a determining factor in overall Project viability and that it is reasonable to include Inferred Resources in the Feasibility Study, particularly given that the Lance Projects were recently operating and produced uranium for over three years.

In accordance with the relevant regulations governing the disclosure of mineral projects, readers are cautioned that mineable resources based on inferred resource material are considered too speculative geologically to enable them to be classified as reserves.



- Led by a well-credentialled team, Peninsula is aggressively advancing its long-life **Lance Uranium ISR Project** towards a production restart decision
- Efficiently and successfully de-risked **Lance** with eye to Final Investment Decision (FID) in CY2022
- **Lance** is perfectly positioned to play a role in supplying fuel to nuclear plants as a part of the green energy mix
- US producer-specific opportunities through project location in Wyoming, USA
- Strong balance sheet and significant cashflow from long-term uranium sales contracts

Corporate Overview

997m

Shares on issue

A\$0.28

Share Price
(14 April 2022)

A\$279m

Market
Capitalisation

Nil

Term Debt

US\$9.3m

Cash
(as of 31 Dec 21)

US\$19.8m

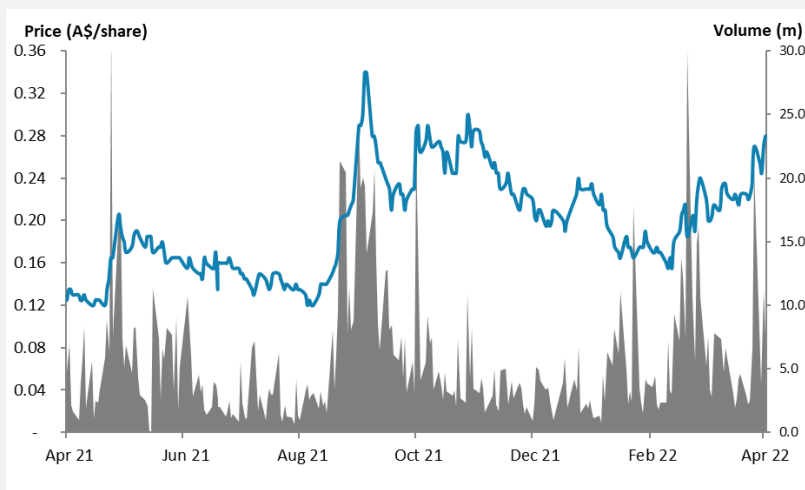
U3O8 Inventory
(as of 31 Dec 21)
(@ US\$63.75/lb)

US\$0.196/sh

OTCQB:PENMF

US\$196m

OTCQB:PENMF



Board of Directors

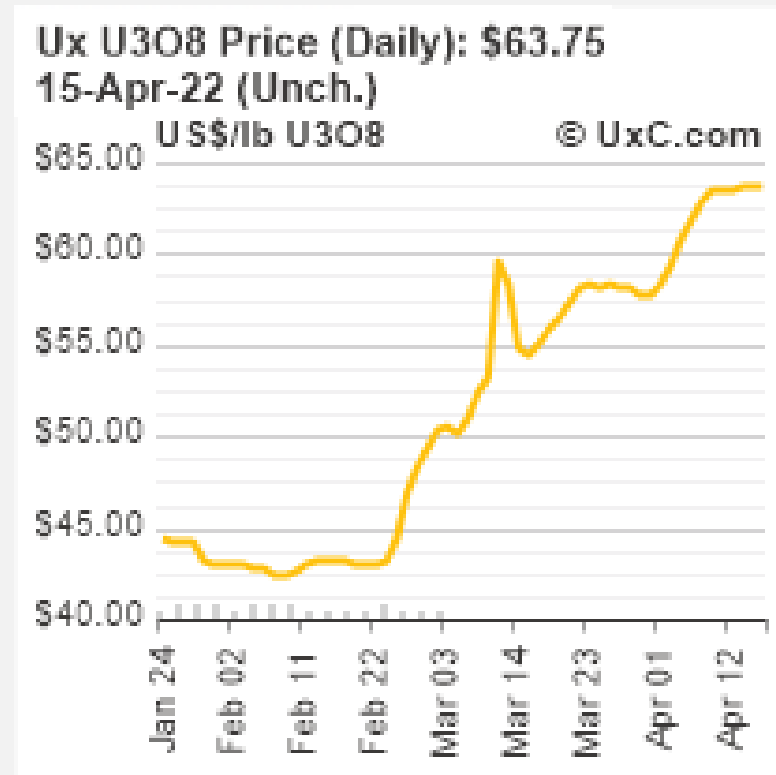
Mr John Harrison	Non-Executive Chairman
Mr Wayne Heili	Managing Director Chief Executive Officer
Mr Harrison Barker	Non-Executive Director
Mr Mark Wheatley	Non-Executive Director
Ms Rachel Rees	Non-Executive Director

Management Team

- Wayne Heili
- Ron Chamberlain
- Jay Douthit
- Mike Griffin
- Ralph Knode
- Brian Pile
- David Hofeling
- Mike Brost

Dynamic & Evolving Uranium Market

- Spot uranium price reset. Currently US\$63.75/pound
 - Key developments include
 - Russia/Ukraine war driving a shift toward an independent Western Fuel Cycle
 - By law or by choice, Western entities are distancing from Russian exports
 - Both supply and demand sides may develop into markets defined by national interests
 - EU draft taxonomy legislation defining nuclear infrastructure as a 'green' investment
 - More activity in term markets in 1Q22 (CAMECO reported contracting 40Mlbs in 1Q22 vs. 30Mlbs for the whole of 2021)
 - Growing role of financial players such as Sprott Physical Uranium Trust (SPUT) and Yellow Cake as active purchasers in the spot market
 - SPUT has purchased over 32 million pounds since Sept-2021



URANIUM & NUCLEAR IN THE UNITED STATES

“Nuclear power provides 52% of America’s clean energy. Because nuclear power plants operate at full capacity more than 92% of the time, it has become our country’s most reliable energy source. This National Clean Energy Week, we are proud to support the advancement of nuclear energy”



US Government is increasing funding to support advanced nuclear power projects and the nuclear fuel industry



There are multiple bills in front of Congress that support the expansion of the domestic nuclear industry capacity from mining to power plants



US\$75 million Strategic Uranium Reserve to be supplied by domestic mines is advancing in 2022



US Government commitment to support nuclear power plant life extensions (Infrastructure Bill)



Jennifer Granholm
Secretary
U.S. Dept. of Energy
November 4, 2021

LANCE URANIUM IN-SITU RECOVERY (ISR) PROJECT

WYOMING, USA

A Modern, Large Scale and Long-Life Asset

- **Lance is one of the largest US uranium projects in size and scale**
 - 53.6M lbs U₃O₈ JORC (2012) compliant resource base¹
- **Licensed to produce up to 3M lbs U₃O₈ per annum**
 - Current (Stage-1) plant capacity of 1.15M lbs U₃O₈ per annum
- **Modern processing and wellfield production facilities constructed in 2015 or later**
 - Production is currently paused - awaiting Project transition to low pH ISR
- **Technically de-risked transition via successful completion of MUIA Field Demonstration**
 - Actively updating project economics based on outcomes to complete FID in 2HCY2022
- **Estimated 6-month lead time to return to production (post FID)**
 - Re-start decision depends on continuation of satisfactory market conditions and a satisfactory outcome from updated economic evaluation

1) See Appendix 1

Applying Industry-Leading Low pH ISR Process

Low pH ISR is the leading method of uranium production globally

- Over 50% of global uranium produced in 2020 was via low pH ISR
 - All of the lowest quartile cash cost uranium mines
- Lance is the only US-based uranium project authorised to use the industry leading low pH ISR method

The 2018 Lance Low pH ISR Feasibility Study¹

- Updated economic evaluations underway, informed by the Low pH Field Demonstration and current external cost influences

- Low pH ISR transition and re-start
 - Low CAPEX requirement of US\$6 million
- Stage 1 ramp up to capacity of 1.15 million lbs p.a.
 - AISC of US\$41/lb
 - Working capital ~US\$15 million (includes mine unit 3)
- Stage 2 expansion to capacity of 2.3 million lbs p.a.
 - AISC of US\$31/lb
 - CAPEX US\$43 million

¹⁾ There is a low level of geological confidence associated with inferred mineral resources and there is no certainty that further exploration and delineation work will result in the determination of indicated mineral resources or that the production target itself will be realised.

Completion of MU1A Field Demonstration

- MU1A Field Demonstration was a thorough study to ensure transition to low-pH is successful
- All key objectives of demonstration were achieved
 - Demonstrated effectiveness of low-pH chemistry and targeted field patterns for dissolving and recovering uranium
 - Provided reagent consumption data required for updated project economic studies
 - Peak recovery grade of 150 ppm U₃O₈ achieved from processing twenty-five pore volumes in a close-spaced pattern
 - Pilot Scale plant recovery systems yielded produced uranium
- Field Demonstration area to be preserved for future pilot testing of advanced recovery plant optimisation concepts

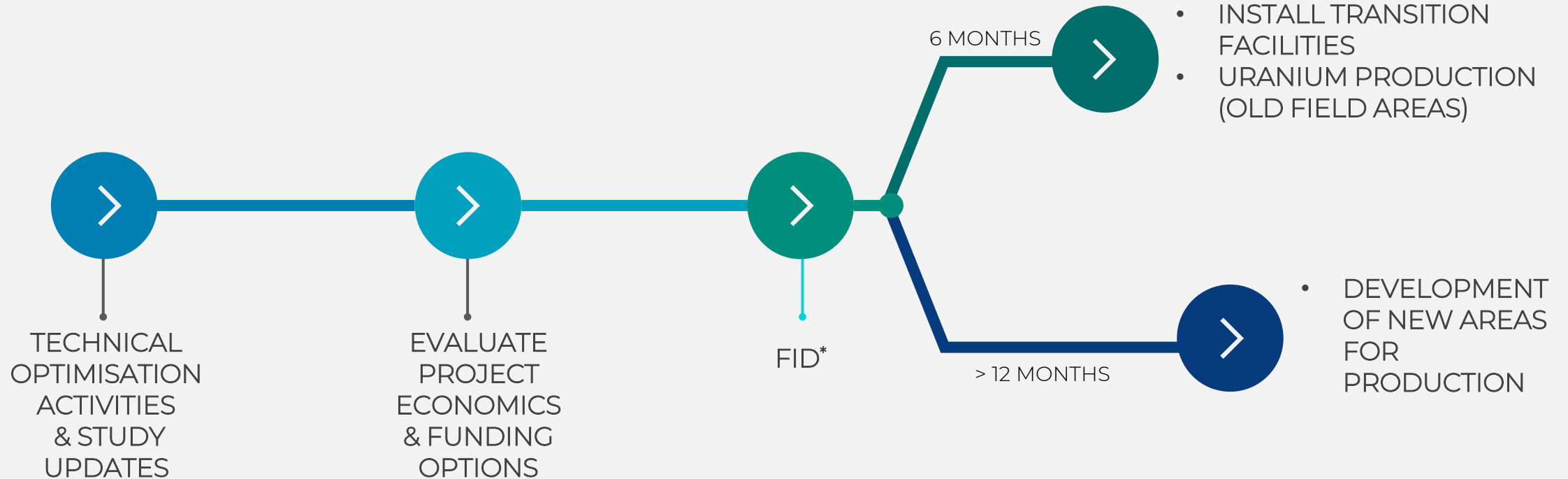


Aggressively Advancing LANCE Ahead of FID

2022 is shaping to be a pivotal year for the Company, with key activities being advanced ahead of FID

- **Updated Lance Projects Feasibility Study is progressing for 3Q2022 release**
 - Study will build on the 2018 Lance Low-pH ISR Feasibility Study
 - Incorporate results and conclusions from the Company's technical de-risking activities, including the recently completed MU1A Field Demonstration
 - Inflationary pressures corresponding to current supply chain issues have been noted and PEN is assessing the likely longer-term impact
- **US\$3.4 million preparatory work program underway to facilitate an accelerated production ramp-up at Lance, once FID is made. Key workstreams include:**
 - Preparation and operational readiness activities in Mine Units 1 and 2
 - Commencement of Mine Unit 3 drilling activities
 - Front-end engineering and design for low pH ISR process modifications
- **Project level staffing is being increased to 37 employees**

A Well-Defined Pathway to Production



* Final Investment Decision (FID) for Low pH implementation and production restart

- FID based on current uranium market conditions
- FID also based on Updated Feasibility Study outcomes

SALES, MARKETING AND INVENTORY

Uranium Sales Contract Book

"A Key Differentiator"



A Junior Uranium Company with long-term sales contracts extending to 2030



Current contracts in place for up to 5.0M lbs at US\$53-\$55/lb U₃O₈, with major utilities in both the United States and Europe

- 3.65Mlbs firmly committed sales (400-450klbs/yr)
- 1.35Mlbs optional at the customers election



CY2022 sales to generate Net Cash Margins between USD 8.0 to 9.0 million

- Binding contractual sales matched with binding fixed price purchase agreements
- Committed matching transactions of 450,000lbs in 2022

Strategic Physical Uranium Inventory

- **Uncommitted physical inventory of 310,000 pounds of uranium concentrate as at 31-Dec-2021**
 - Now valued at US\$19.8 million (US\$63.75 per pound)
- **300,000 pounds of uranium concentrate acquired for US\$31.35 per pound in mid-2021**
 - Delivering considerable appreciation in value for shareholders
 - Doubling of value since time of purchase
- **Holding physical uranium is a low-risk strategy that provides key benefits**
 - Strategically aligned with funding requirements to transition Lance to a low pH ISR operation and resume production
 - Strengthens working capital and enhances flexibility in marketing product

A COMPELLING URANIUM PROPOSITION

Upcoming Workstreams and Catalysts

- Updated economic evaluations for Lance
- Deliverables from US\$3.4M early preparatory works program
- Preparations and FID for restart of Lance Project
- Amendments to existing permits and licenses
- Financing and sales contracting activities



A Transformative 12 Months Ahead

Low capex requirement and short timeframe for production re-start at Lance Project

Lance is the only US-based uranium project authorised to use industry leading low pH ISR method

Led by a well credentialed technical and commercial team

Ongoing cashflow underpinned by current uranium sales with upside exposure through 310,000 pounds of physical uranium

Importance of uranium as a clean energy source growing rapidly across the globe

Increasing number of positive catalysts in the US domestic uranium sector

Systematically advancing towards a FID in CY2022 to restart operations at Lance

The Peninsula Advantage

- Idled US uranium producers and developers with sufficiently de-risked assets may have a unique opportunity to capture emerging US demand in a Western-focused nuclear fuel market
- Most uranium developers remain years away from achieving actual production-readiness with significant staffing, technical, regulatory, operational and market-related obstacles in the way
- Peninsula has completed staffing, technical, regulatory and operational de-risking activities to allow a rapid speed-to-market pathway and to leverage current uranium market opportunities

Contact Details

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FURTHER INFORMATION

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Appendix 1 – Resources

Lance Projects Resource Estimate as at 31 December 2020¹

Classification	Tonnes (million)	U3O8 (kg)	Grade (ppm U3O8)	U3O8 (lbs)
Measured	3.4	1.7	489	3.7
Indicated	11.1	5.5	496	12.1
Inferred	36.2	17.2	474	37.8
Total	50.7	24.4	480	53.6

¹) JORC Table 1 included in an announcement to the ASX released on 14 November 2018: “Revised Lance Projects Resource Tables”. Peninsula confirms that it is not aware of any new information or data that materially affects the information included in this announcement and that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person’s findings are presented have not been materially modified from the original market announcement.